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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,553	09/26/2005	Mamoru Takimura	Q90237	1936

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EXAMINER

FISCHER, JUSTIN R

ART UNIT	PAPER NUMBER
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1733

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary**Application No.**

10/550,553

Applicant(s)

TAKIMURA, MAMORU

Examiner

Justin R. Fischer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application:
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 92605.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirata (US 4,675,355) and further in view of Lommerts (US 5,194,210). Hirata is directed to a pneumatic tire construction having a topping rubber formed with a nitroso compound, wherein a significant amount of inventive rubber compositions have a modulus and a rebound resilience in accordance to the claimed invention (Column 1, Lines 5-15 and Table 1, Examples 6-13). Furthermore, a fair reading of Hirata suggests that one of ordinary skill in the art at the time of the invention would have found it obvious to use the above noted composition in either a carcass or a belt (Column 7, Lines 5-20). However, the reference is completely silent with respect to the fiber reinforcing elements used in the carcass and/or belt. In any event, it is well known to use polyketone fiber cords in a wide variety of tire components, including carcass plies and belt plies, since they provide a high degree of tensile strength and demonstrate high creep resistance, as shown for example by Lommerts (Column 5, Lines 30-50). In particular, Lommerts teaches the specific use of said polyketone fibers instead of conventional tire reinforcing elements, such as rayon, nylon, polyester, and aramid. As such, one of ordinary skill in the art at the time of the invention would have found it

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obvious to form the carcass and/or belt of Hirata with polyketone fiber cords for the reasons detailed above.

With respect to claim 3, as detailed above, nearly two-thirds of the rubber compositions expressly disclosed by Hirata in Table 1 satisfy the modulus and rebound resilience of the claimed invention.

As to claim 4, the polyketone described by Lommerts is an alternating polymer of carbon monoxide and ethylene (Column 2, Lines 5-10).

Regarding claim 7, Hirata generally teaches a rubber composition useable in pneumatic tires (Column 1, Lines 5-10). One of ordinary skill in the art at the time of the invention would have found it obvious to use the rubber composition of Hirata in a wide variety of pneumatic tires, including passenger car tires, since the previously disclosed benefits are applicable to such tires and applicant has not provided a conclusive showing of unexpected results to establish a criticality for using the claimed rubber composition in a passenger car tire.

Lastly, the results of Table 1 and 2 are not persuasive since the benefits would be expected to result in following the suggestions of the prior art. In particular, Hirata expressly teaches a rubber composition satisfying the claimed modulus and rebound resilience. In modifying Hirata with Lommerts, one of ordinary skill in the art at the time of the invention is only directed to use polyketone fiber cords- the reference specifically teaches the use of such cords in place of conventional reinforcing materials, such as rayon, nylon, polyester, and aramid. Thus, given the above noted reference, the only possible combination is a ply component formed of the claimed rubber and the claimed

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reinforcing elements. It is emphasized that Hirata expressly teaches a ply component formed with a rubber composition satisfying the claimed properties- the specific selection of polyketone fiber cords to form said plies would have been obvious in view of Lommerts. In such an instance, the benefit of improved high-speed durability would necessarily result since it is directly related to the use of the claimed rubber composition and the claimed reinforcing element.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Justin R Fischer
Primary Examiner
Art Unit 1733

JRF
March 19, 2007